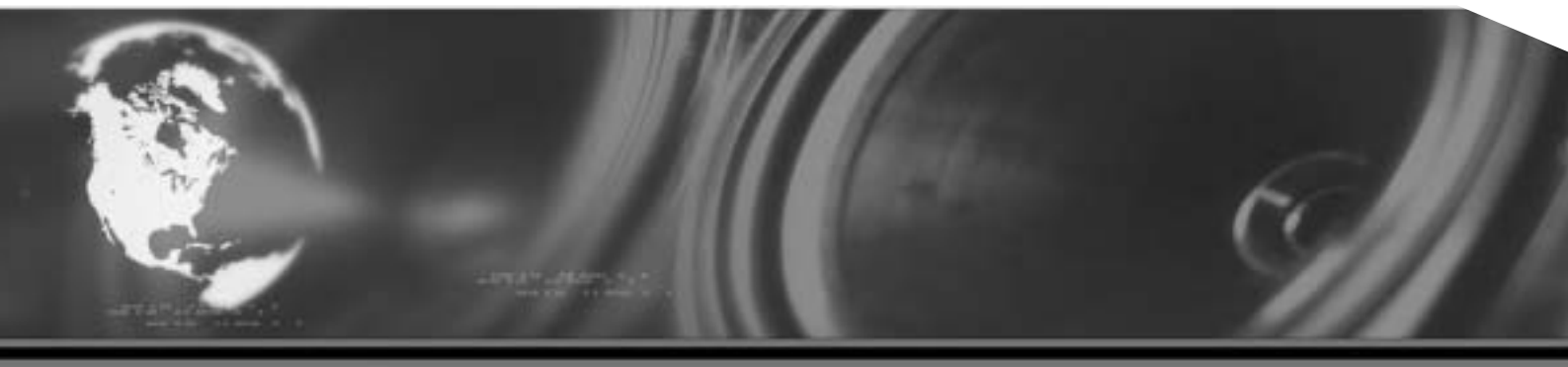
AV-506

DIGITAL SURROUND AMPLIFIER



USER'S MANUAL

Please read the following instructions carefully before connecting, operating or adjusting this product. Besides that, please keep this manual in a convenient place for future reference.

FOREWORD

Thank you very much for your patronage. Your choice of this product fully indicates your trust towards our company. We are extremely pleased for being able to supply a product to meet your demand. In order to obtain the best performance of the audio equipment, we suggest that you spend some time to read this 《User Handbook》carefully before using this equipment. It helps you understand various functions of this product and to allow you to appreciate flawless effect.

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SAFETY WARNING

Note: To reduce risks of electric shock, never dismount the enclosure (orback) by yourself. If the machine needs repair, please take it to the professional maintainer.

An arrowed-lightning signal within a triangle is used to awoke the user that there are un-insulated bare parts in the device and output terminals, which bear a voltage that can cause personal injuries. Users are not allowed to open the enclosure of the machine and touch the powered terminals.

A triangle with an exclamatory mark is used to remind the user that if the device fails and needs repairs, please commit this to a qualified maintainer or contact the device supplier.If components with a "⚠" mark in the device need replaced ,they should be of the same size and specifications as the original ones.

- To avoid any electric shock, never match this plug (with polarity) into expansion cables at will, sockets or other outlets unless each pin of the plug can be fully inserted into them without exposing any metal section.
- If the device fails and needs repairs, commit this to a qualified maintainer.
- The device should not be exposed in rains, watered or damp places. Nor any containers containing water or liquids (such as vases or cups) can be placed on the device.
- Never place any bare fire sources (such as a lighted candle) on the device.

ENVIRONMENT PROTECTION

- We have omitted the redundant packaging materials and simplified them into three kinds: cardboard（carton）, polystyrene foam（act as shock absorption）and polythene（container bag, protective gummed paper）.
- If the product is unpackaged by professional companies, some materials of your product can be recycled. When disposing disused packaging materials, batteries and old devices, environment protection must be taken into consideration, and observe related local laws and regulations.

MAIN FEATURES

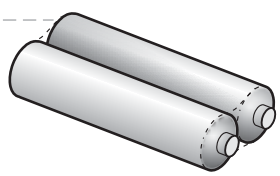
* DOLBY DIGITAL, PRO-LOGIC Ⅱ, and DTS decoding
* Independent amplifying circuit with 5 sound channels
* High power ring transformer
* Perfect loudspeaker protection circuit.
* Infrared fully remote control.
* 4 DSP effects
* FM/AM

EXAMINING PARTS

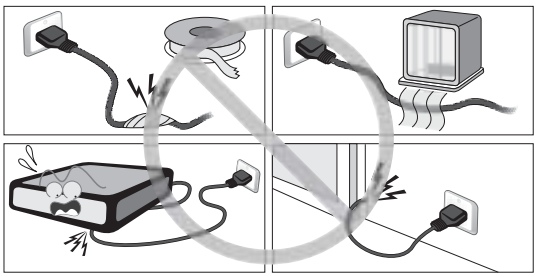
Check to see if any of the following are missed:

- One AV-506 Model Digital Surround Amplifier
- One User Manual (this manual)
- One set of FM Indoor Antenna
- One set of AM Ring Antenna
- Remote Controller

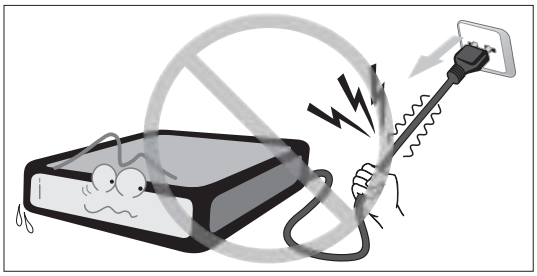
- AAA Battery



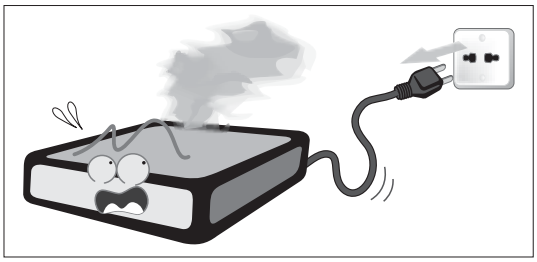
If any item is damaged or lost, you should replace it of the same specification. Please contact with your dealer or directly consult our company's after-sale service department.



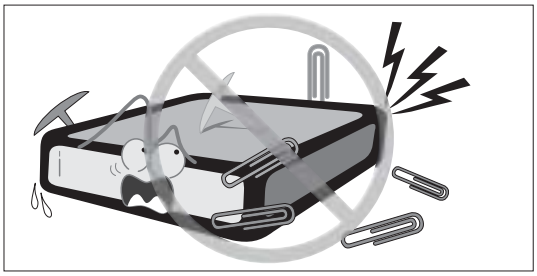
Please use the device with care and do not damage its power cable.



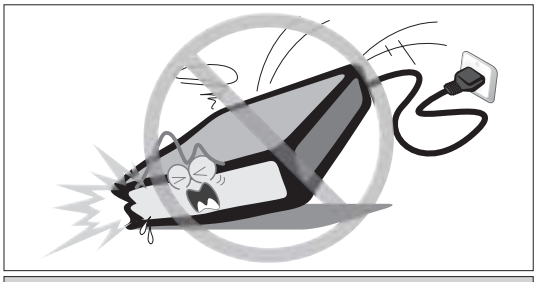
When you pull out the power plug, you should nip the plug and pull it out instead of only grabbing the power cable.



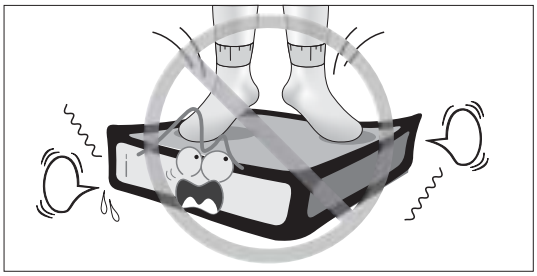
To avoid electric shocks, please do not dismount the cover. If any abnormal phenomena occurs: 1. Turn off the power immediately; 2. Pull out the power plug from the outlet; 3. Ask for a professional maintainer to repair it.



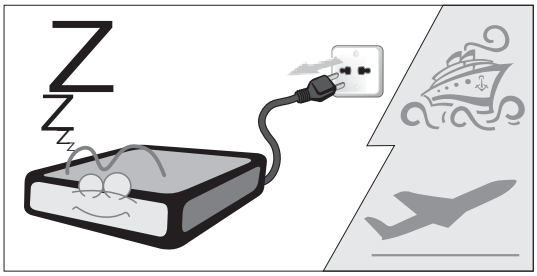
Never place any containers with liquid onto this device. Do not let any metals and tinderboxes drop into the cabinet. Pay more attention when children are playing around.



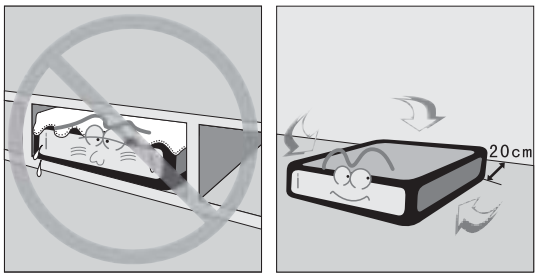
Do not impact the body of the device. In the use of the device, do not sway or move it to prevent unexpected things occurring.



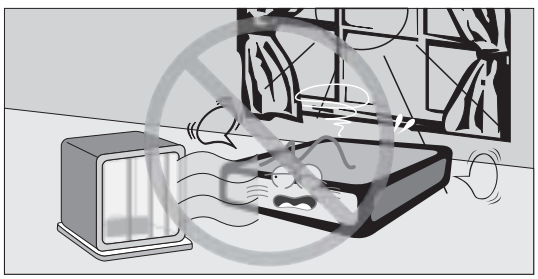
Please do not stand or climb on this machine, otherwise the machine may be damaged or the person may fall down from the machine.



If the machine is not used for a long time, pull out its power plug please. Because even the power switch is turned off, the machine is still not completely disconnected from the power supply and it will still consume some power.



Place this machine on an even and steady table, with a distance of at least 20cm from walls. Never block up the vents so that the machine can be well ventilated. Never cover the machine with objects such as duster cloth, books and so on in use .

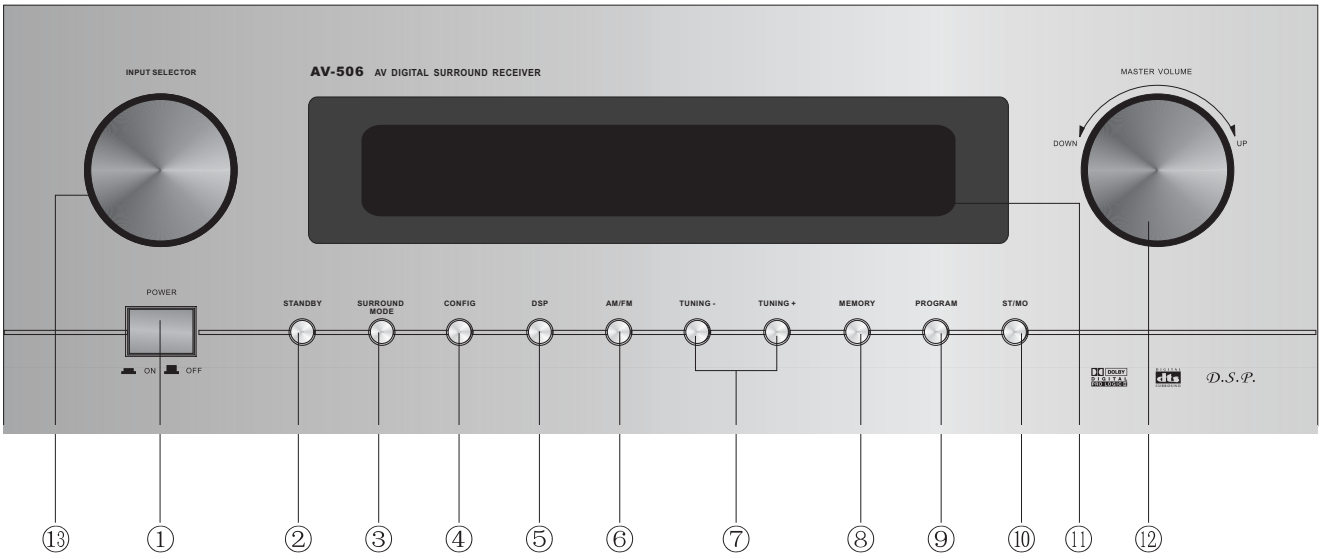


Avoid placing the machine under direct sunshine or near any heat source.

Additionally, avoid placing this machine in the following places :

- The place water or oil may be splashed in or thick smoke may be absorbed in.
- The place not steady.
- The place vibrating.
- The place dusty and damp
- The place where the temperature is too high (such as an enclosed small space)

SETUP OF PANEL FUNCTIONS



1. POWER switch

Press to start the unit. Power off when the unit is not in use for a long time.

2. STANDBY indicator

When this function is enabled, the display will go out and the corresponding STANDBY indicator will light, indicating the device enters the status of energy saving. Push the button again will make the indicator go out, and the display will be lighted, indicating the equipment is back to the Normal status.

3. Button of surround mode

In case of OPTICAL or COAXIAL input, by pressing this button you can select the surround mode among STEREO, PRO II -MOVIE, PRO II-MUSIC, DTS, and DIGITAL. In case of TV, VCR and TUNER input, by pressing this button you can select the surround mode among PRO II-MOVIE, PRO II-MUSIC, and STEREO.

4. CONFIG button

Button of bass configuration ,You can select the speaker system configuration between CONFIG 1 and CONFIG 2 according to the user's speaker system condition.

5. DSP sound effect selection button

This button changes the two-channel sound effect to five-channel surround effect. Continuously press this button will circulate among 4 DSP modes, and the display will show THERTRE, HALL, LIVE and CHORUS symbols correspondingly. Press this button again will exit the DSP Modes. This feature only functions with DVD, VCR, TAPE and TUNER inputs.

6. AM/FM band selection button

7. TUNING-/ TUNING+ radio program search

Use this button in combination with the Function button, press the Function button to enter into the PROGRAM status, and then press the TUNING-/ TUNING+ button to select the pre-saved radio programs; if under the MANUAL status, lightly press the TUNING-/ TUNING+ button To tune in programs manually; press down this button without release will trigger the automatic radio program searching function.

8. Radio station save button

9. Selection button of pre-saved radio stations

In the TUNER mode, press this button to select the pre-saved radio stations.

10. MONO/STEREO mode switch button

In the TUNER mode, press this button to switch between the MONO and STEREO mode.

11. VFD screen

Multi-function dynamic lattice screen.

12. MASTER VOLUME knob

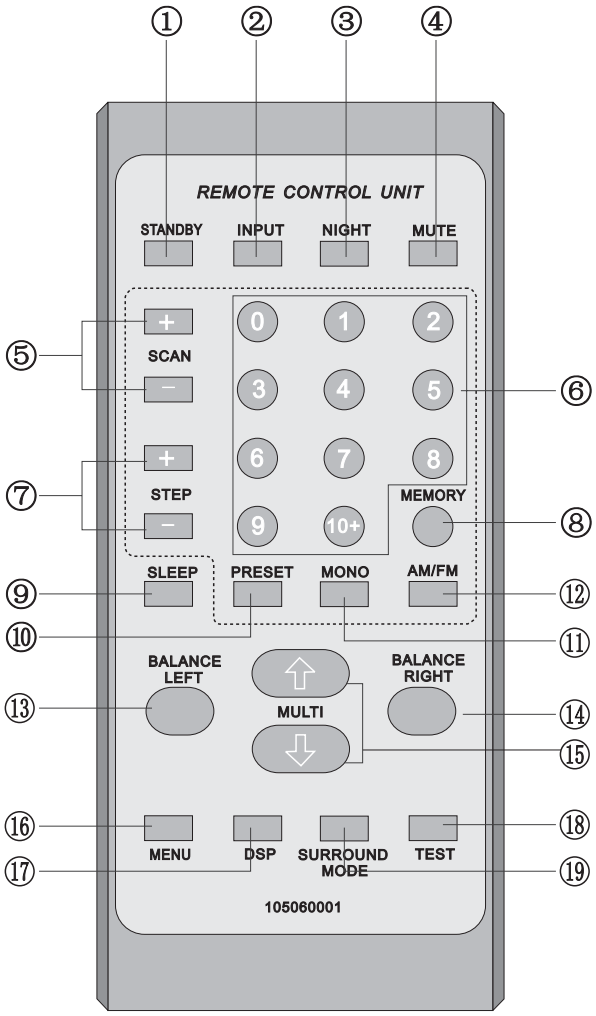
Turn anticlockwise will reduce the volume (DOWN), while rotate it clockwise will increase the volume (UP).

Simultaneously, this knob controls the volume of the FRONT L & FRONT R, CENTER, REAR, and SUBWOOFER speakers. Turning this knob will get a proper 5.1-channel volume.

13. INPUT SELECTOR knob

Rotate the knob to select the input source among TV, TUNER, COAX1, COAX2, OPTICAL, DVD and VCR.

SETUP OF REMOTE CONTROL FUNCTIONS



1.Standy button
2.Signal input selection button
3.Night mode button
4.Mute button
5.SCAN (+/-) program-searching button
6.Program scanning and saving digital button
7.STEP (+/-) program searching button
8.Radio program saving button
9.Sleep timer
10.Frequency preset button
11.Stereo/single-track switching button（only function with TUNER Input）
12.AM/FM selection button
13.Left-track balance volume down button
14.Right-track balance volume down button
15.Multi-function control button
16.Multi-function menu button
17.DSP button
18.Noise test button
19.Surround mode selection button

USAGE NOTICE ON REMOTE CONTROLLER

To install batteries in the remote controller

1. Open the cover of the battery compartment.

2. Install batteries according to the correct "+" and "-" poles as shown.

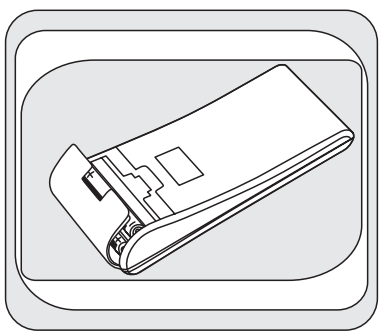
3. Close the cover.

Cautions:

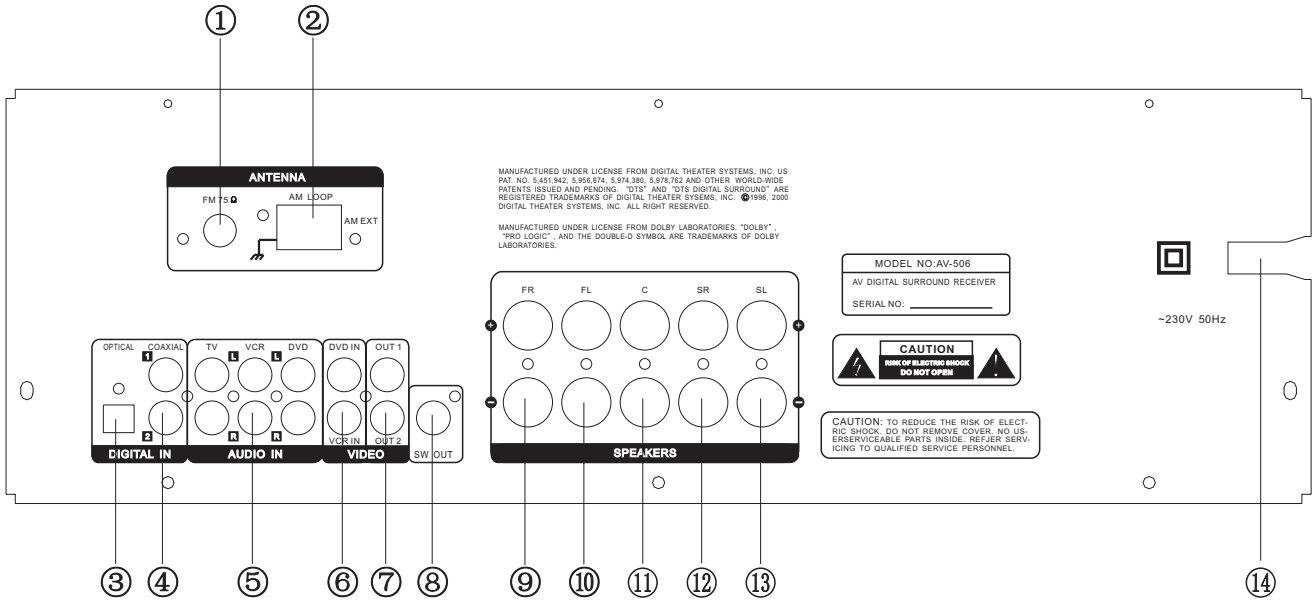
- Take out the used-up batteries or batteries unused for a long time.

- Never use new and old batteries or different kinds of batteries together.

- Batteries contain chemical materials. They should be properly managed after used up.



SETUP OF BACKBOARD FUNCTIONS



1. FM antenna input terminal
2. AM antenna input terminal
3. OPTICAL input terminal
4. COAXIAL1 & COAXIAL2 input terminals
5. TV, VCR & DVD sound-track audio input terminals
   Use two signal wires to connect corresponding equipment. When select the input mode, press the INPUT button on the remote controller to select one from TV, VCR and DVD input. If the input signal comes from a DVD, the signal wires shall be connected to the DVD IN terminals on the power amplifier.
6. Video input terminal
7. Video output terminal
8. Subwoofer output terminal
9. Terminal for front right-track speaker to be connected to the FRONT R speaker, load impedance at 8Ω.
10. Terminal for front left-track speaker to be connected to the FRONT L speaker, load impedance at 8Ω.
11. Terminal for center-track speaker to be connected to the CENTER speaker, load impedance at 8Ω.
12. Terminal for surround right-track speaker to be connected to the SURROUND R speaker, load impedance at 8Ω.
13. Terminal for surround left-track speaker to be connected to the SURROUND L speaker, load impedance at 8Ω.
14. Power plug

SYSTEM CONNECTION

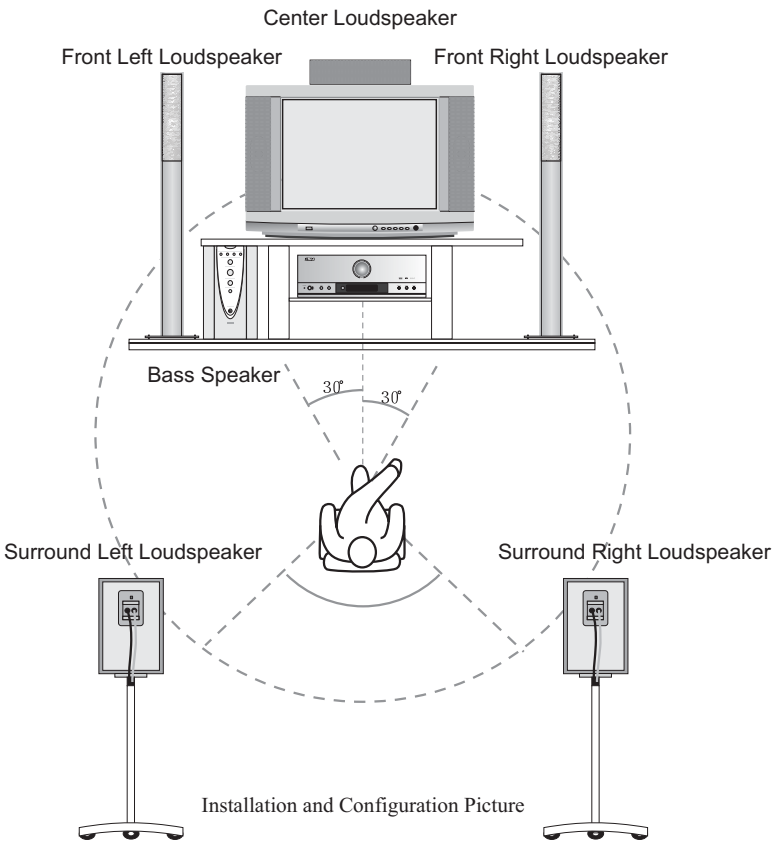
1. To place loudspeakers

In order to gain the best surround sound effects, please place the loudspeakers as the following positions (as shown at right):

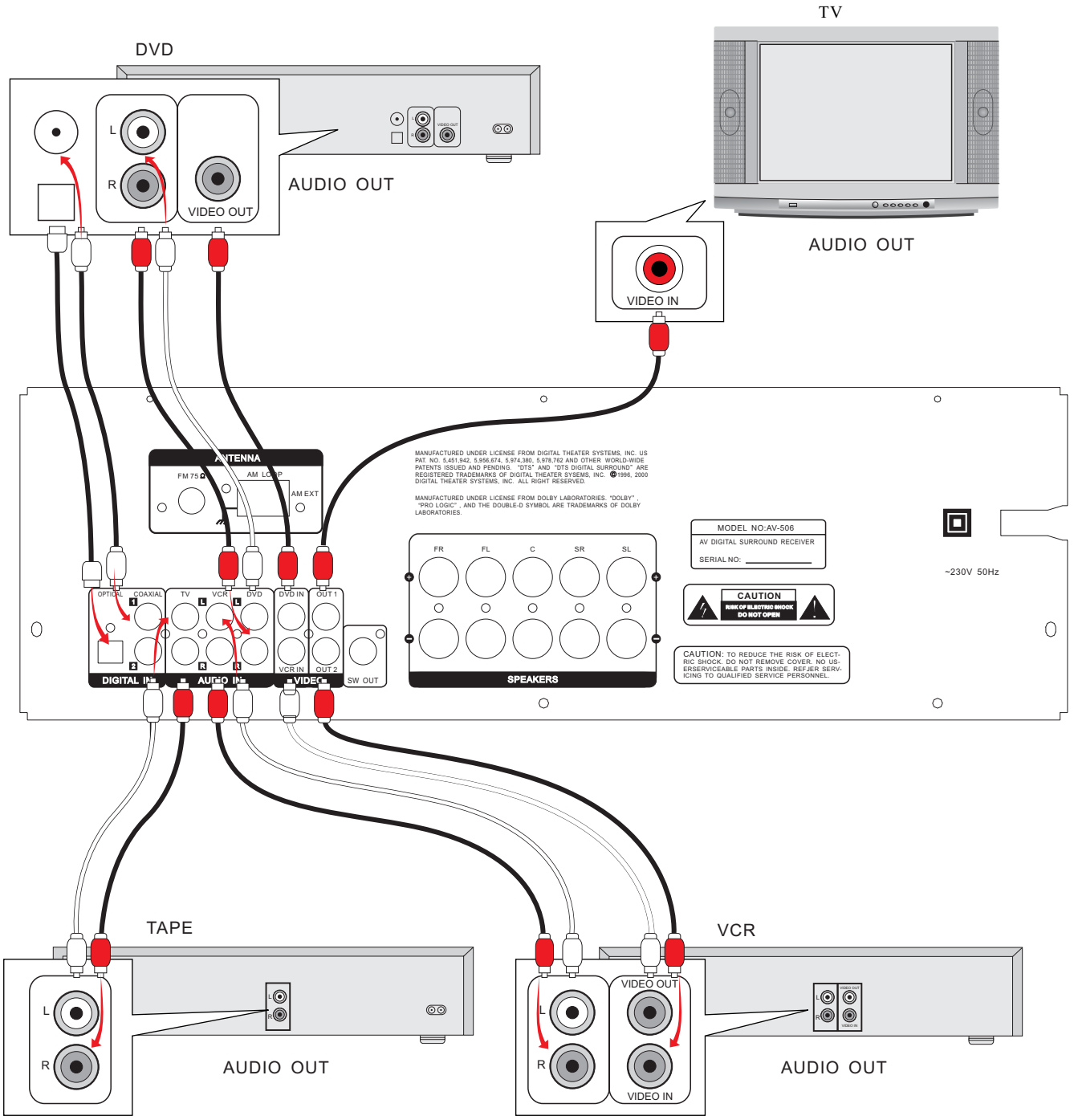
1. Place the front left and front right loudspeakers by equidistance with the TV at the center, with an angle of 45 degrees against the listening point.
2. Place the center loudspeaker on or under the TV, so that center channel sound source can be located.
3. Place the surround sound effect loudspeakers at the general listening height, place or mount on walls face to face.
4. Place the bass loudspeaker on the floor, near the TV.

Note:

- To avoid interferences caused by magnetic force, please do not place the front loudspeakers close to the TV.
- If the rear surround loudspeaker is located too far away from the listening position of the center loudspeaker, the surround sound effect will become weak.
- All loudspeakers must be installed in a secure way to avoid unexpected things and improve the quality of Loudspeakers.



Installation and Configuration Picture


TV
DVD
AUDIO OUT
VIDEO OUT
L
R
VIDEO IN
AUDIO OUT
ANTENNA
FM 75Ω
AM LOOP
AM EXT
MANUFACTURED UNDER LICENSE FROM DIGITAL THEATER SYSTEMS, INC. US PAT. NO. 5,451,942, 5,956,674, 5,974,380, 5,978,762 AND OTHER WORLD-WIDE PATENTS ISSUED AND PENDING. "DTS" AND "DTS DIGITAL SURROUND" ARE REGISTERED TRADEMARKS OF DIGITAL THEATER SYSEMS, INC. ©1996, 2000 DIGITAL THEATER SYSTEMS, INC. ALL RIGHT RESERVED.
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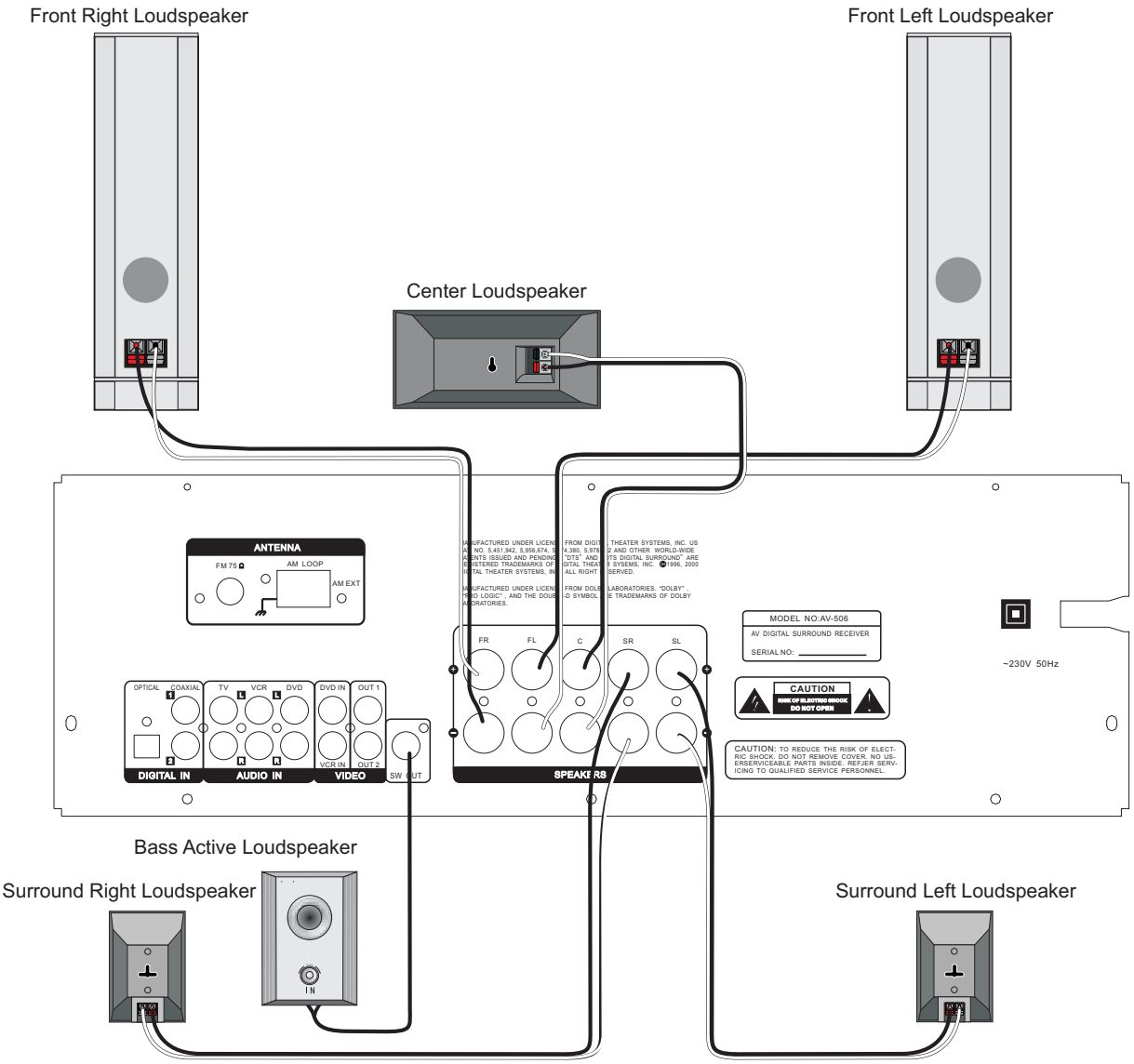
MODEL NO:AV-506
AV DIGITAL SURROUND RECEIVER
SERIAL NO:
~230V 50Hz
CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER. NO USERSERVICEABLE PARTS INSIDE. REFJER SERVICING TO QUALIFIED SERVICE PERSONNEL.
FR FL C SR SL
SPEAKERS
OPTICAL COAXIAL
TV VCR DVD
DVD IN
OUT 1
OUT 2
VCR IN
SW OUT
DIGITAL IN
AUDIO IN
VIDEO
TAPE
AUDIO OUT
VCR
VIDEO OUT
VIDEO IN
AUDIO OUT

★ Leads are required

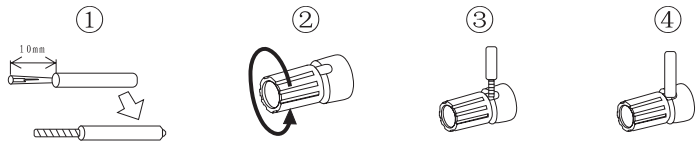
◆ Audio signal lines (not come with this device)

◆ When connecting system audio signal lines, the white signal line corresponds to the left input (the white jack) of this machine, and the red signal line corresponds to the right input (the red jack) of this machine.



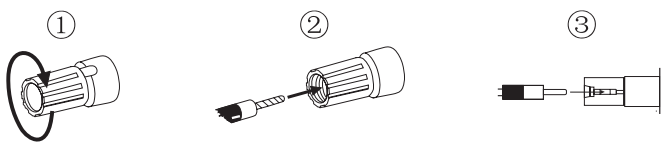
★Two methods for connecting loudspeakers with this machine

◆Direct connecting by leads



① Peel off the plastic skin of the connecting leads by a length of 15mm, then twist tight the inner leads.
② Anticlockwise unscrew the speaker output terminals of the machine
③ Put the peeled parts of the leads into the terminals.
④ Clockwise screw the speaker output terminals of the machine.
Note: Never put the plastic part of the leads into the terminals, or loose contacts can arise and lead a fail output.

◆Connecting by banana plugs



① Clockwise screw the speaker output terminals of the machine.
② Insert the banana plug that has connected with leads into the terminals in a secure way in the direction as shown in the picture.
③ This is the view of the connected banana plug at the terminal side.
Note: Screw the terminals of the machine tight, or loose contacts can arise and lead a fail output.

Carefully examine and confirm the connection before the equipment's power on.

1. Power on and off

☆Insert the equipment's power plug into an AC power supply socket, press down the power switch to energize the equipment. And the display will light up and show the status before last power off.

2.Select input signal sources

☆Press the INPUT button on the remote controller to select one mode from DVD, VCR, TV, COAXIAL (1&2), OPITCAL and TUNER inputs;

3.Select the tuner's wave band

☆Press the remote controller's FM/AM wave band switch button to select FM or AM tuning mode.

☆Scan radio programs

☆Search manually

◎Press the INPUT button on the remote controller to enter into the TUNER mode, press the AM/FM button to select the tuning mode, and Then choose SCAN+ - or STEP to scan radio programs. When a radio program was found, the frequency will be automatically locked.

Note: Please confirm that the step length in your region is in line with the equipment's setup when you are listening to radio programs. In Case of misalignment, the listening effect will not be maximized or no radio program can be listened.

☆For AM manual search, there are two kinds of step length. One is 9KHz, and the other is 10KHz. Use the MONO button on the remote controller to switch and control, according to the display of AM STEP 9KHz or AMSTEP 10KHz.

☆Automatic scan

◎Press the INPUT button enter into the TUNER mode. Hold down TUNING+ or TUNING- for two seconds, or press the SCAN+/SCAN- button on the remote controller. Then the equipment will automatically scan up or down radio programs, and enter into the MUTE mode. When a radio program is searched, the equipment will stop scanning and switch to the listening status.

Note: Use the remote controller's STEP+/STEP- and TUNING+/TUNING- button to manually search radio program continuously. And the equipment will not enter Into the MUTE mode during searching, enabling you to find weak radio program signals.

☆ Instant tuning

◎You may save the radio programs searched manually or scanned automatically. In this way, you may instantly tune in the radio program by simply pressing the digit buttons on the remote controller. You are allowed to preset and save 30 FM and 30 AM radio programs.

☆ Pre-store radio programs

◎ Select a radio program searched manually or scanned automatically;

◎Press the MEMORY button, and accordingly the display will show MEMORY P--;

◎Select one from 1-10 digit buttons to save the program. If MEMORY P08 is displayed, this indicates the preset and save operation is completed.

☆FM stereo/single-track mode selection

◎Under the FM status, when a stereo radio program is searched manually or automatically, FM STEREO will be displayed automatically. If the FM program signal is weak, press down the MONO button, and the screen will display FM MONO, indicating that a single-track Mode is selected to improve the sound quality and listening effect.

4. DSP mode selection

◎At the time of selecting a signal input mode among DVD, VCR, TV and TUNNER, press the sound field effect button or the DSP Button on the panel to select one from THEAT, LIVE, CHORUS and HALL or select DSP OFF to disenable the DSP sound field effect.

5.Listening mode selection

◎The STEREO symbol indicates that the equipment does not perform any sound field processing of the signal.

◎For a DVD, VCR or TV signal input, if the program source is Dolby Pro Logic Coding processed, press the SURROUND mode button on the remote controller to select one mode from Pro Ⅱ-Movie, Pro Ⅱ- Music and STEREO.

◎ In the case of a PCM signal input, select among the STEREO, PRO II MUSIC and PRO II MOVIE modes.

◎ In the case of DTS or DIGTAL, the status may be identified automatically.

◎As for a digital (COXIAL or OPTICAL) input, press the SURROUND mode button to switch between DTS, DOLBYDIGITAL and STEREO, with the status of DTS or DOLBY DIGITAL displayed automatically.

6. Time delay adjustment of surround channels

◎For a DVD, VCR or TV signal input, if the program source is Dolby Pro Logic Coding processed, press the MENU button to select the SDELAY function. Press the MULTI control button to adjust the time delay of surround channels from 15ms to 30ms for getting the optimal listening effect.

◎In the case of an OPTICAL or COAXIAL input, if the program source is Dolby Digital processed, the time delay of surround channels may be adjusted between 15ms and 30ms.

7.Speaker volume adjustment

◎ Press the noise test button to listen to the test sound from each speaker. Press this button again to turn off the test sound.

◎If wanting to balance the front left and right speakers, press the balance button on the remote controller to make proper adjustment.

◎To change the volume level of surround speakers, press the MENU button on the remote controller , select the SUR mode, and then press MULTI button to make adjustment.

◎To adjust the volume level of the center-channel speaker, press the MENU button on the remote controller , Select the CEN mode, and then press MULTI to make adjustment.

◎To adjust the volume level of the subwoofer, press the MENU button on the remote controller , Select the SW mode, and then press MULTI to make adjustment.

8. Press the remote controller's volume button or rotate the MASTER VOL knob on the panel to perform simultaneous volume adjustment of all channels.

9.AM/FM tuning

◎Press the remote controller's INPUT button and select the TUNER input mode, and then press the AM/FM on the remote controller to perform FM or AM radio program scanning and selection.

◎Under the FM mode, press the MONO button on the remote controller to select stereo or single-track mode (only valid for FM wave band).

◎Press the MEMORY button on the remote controller to save radio programs.

◎Press the SCAN button to automatically scan radio programs, i.e. SCAN+ searches programs upward and SCAN- downward.

◎Press the STEP button on the remote controller to set the step length, i.e. STEP+ increases the step length and STEP- reduces the length.

10. MUTE operation

◎Press the MUTE button to disable the output to all speakers, and the MUTE symbol will be displayed.

◎Press the MUTE button again will enable the output to all speakers, and the MUTE symbol will disappear.

11. Bass setup

◎If you use a small sound box or satellite speaker, you can only select the SP CONFIG1 mode. You can directly press the CONFIG button on the panel to display SP CONFIG1 or SP CONFIG2. Where the SP CONFIG2 status is displayed, Press the CONFIG knob to switch to The SP CONFIG1 status. Then you may make proper configuration for your sound box.

◎If you use a big sound box or a set of family cinema configurations, you'd better select the SP CONFIG2 mode. You can directly press the CONFIG button on the panel to display SP CONFIG1 or SP CONFIG2. Where the SP CONFIG1 status is displayed, Press the CONFIG Knob to switch to the SP CONFIG2 status. Then you may make proper configuration for your sound box.

12. Antenna connection of receiver

Ⅰ. Antenna connection

→Connect the AM loop antenna to the AM antenna ramp on the receiver's rear board;

→Connect the FM parallel antenna to the FM antenna ramp on the receiver's rear board;

Ⅱ. Instructions for connection

→To prevent the receiver from picking up noise, the AM antenna must be kept away from such interference sources as the CD player (video player) and fluorescent lamps.

→The FM antenna must be fully extended and kept horizontally as much as possible.

→If the FM antenna does not offer a satisfying effect, please use an additional cable (not supplied) to connect the receiver to an outdoor FM antenna.

13.Sleep time set up

◎Press the SLEEP button on the remote controller to set up appropriate automatic shutdown time according to your personal demand. Options include 30, 60, 90 and 120 minutes. When the preset sleep time option is met, the equipment will be automatically turned off.

Warning: if an outdoor FM antenna is used, a lightening arrester must be installed.

TROUBLESHOOTING

If the machine does not work properly, cut off its power immediately, and examine the following items. If the problem still exists, maybe there is something wrong. Please contact your dealer or our company.

PROBLEM	CAUSE	SOLUTION
Screen display in disorder or abnormal function	◇Microcomputer processor of this unit is affected by external factors (such as fluorescent lamp), creating false move or errors	◇Switch off power and restart unit after 30 seconds
No sound	◇Speaker connection is loose ◇Speaker output is not tightly screwed down while using rubber to connect speakers ◇Audio equipment input is wrongly connected or not tightly connected ◇Volume control is tuned too low ◇ “MUTE” key on the remote control is pressed	◇Screw down speakers connection firmly ◇Screw down speaker output tightly ◇Reconnect sound input equipment according to requirements ◇Adjust volume appropriately ◇Press “MUTE” key on the remote control to regain sound
Infidel Audio	◇Volume is too loud ◇Reversed negative and positive connection on the speakers	◇Adjust volume down appropriately ◇Reconnect wires correctly
Intermittent sound,with continuous “tick-tat” noise from the unit	◇Speakers smaller than 4ohm is used ◇Short-circuit on the connection of speakers ◇Excessive volume, unit is in protection	◇Replace speakers greater than 4ohm ◇Cut off power, well connect speaker wires to eliminate short-circuit ◇Appropriately adjust to lower volume
No output from central and surround speakers	◇The unit is under stereo status ◇Central and surround speaker volume is too low	◇Enter SURROUND ◇Adjust volume to suitable level
Remote control does not work	◇Batteries expire ◇Direct sunlight shone on receiver window ◇Unit and remote control blocked by obstacles	◇Change batteries ◇Change position of unit ◇Remove obstacles

MAJOR TECHNICAL FEATURES

☆Tuner

1. Frequency range: AM---------- 522KHz～1611KHz（Step length: 9kHz）
   ---------- 530MHz～1610MHz（Step length: 10kHz）
   FM------ ----------87MHz-108MHz
2. Sensitivity: AM---------- ≤10mV/m
   FM---------- ≤40uV
3. Signal-noise ratio: AM (A weighing) ---------- ≥34dB(weigh)
   FM----- ----------≥34dB

☆Amplifier

1. Main channel power output (8Ω)
   Rated value---------- ----------36W×2
   PMPO-- ---------- 140W×2
2. Center channel power output (8Ω)
   Rated value (RMS)------ ----------40.5W×1
   PMPO--- ----------140W×1
3. Surround channel power output (8Ω)
   Rated value (RMS)---------- 36W×2
   PMPO--- ---------- 140W×2
4. Rated THD----- ---------- ≤2%
5. Frequency response---------- ---------- 10Hz～24kHz(±3dB)
6. Signal-noise ratio: (A weighing)---------- ≥85dB
7. Input sensitivity---------- ≤270mV
8. Power supply----------～230V 50Hz
9. Power consumption---------- 210W
10. Dimensions (L×W×H)---------- 430×320×151mm
11. Weight: net value---------- 7.1kg

Note: 1.The above index is only for reference.
2.Please forgive us not to give any other notification if there is any change of the shape and technical characteristic of the machine.

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